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South Carolina Commission on Higher Education

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June 5, 2014

MEMORANDUM

To: Chairman John L. Finan and Members, S.C. Commission on Higher Education

From: Dr. Bettie Rose Horne, Chair, Committee on Academic Affairs and Licensing, and Members

Consideration of Annual Evaluation of Associate Degree Programs FY 2011-2012

Background

The South Carolina 1979 Master Plan requires the annual review of associate degrees in the State's public higher education institutions. In 1996, the passage of Act 359 underscored the importance of program accountability by focusing on questions related to time to degree and graduates' first-time passing rates on professional licensure examinations. Over time, the concept of accountability of institutions of higher education has grown on the national agenda.

The purposes of this study remain relevant as part of the focus of both state and national governments on institutional accountability. The language of Act 359 maintained the purposes of this annual review as they had been articulated in earlier legislation and Commission policy as follows:

- 1) to insure that programs demonstrate responsiveness to employment trends and meet minimum standards of enrollment, graduation, and placement; and
- 2) to identify programs which need to be strengthened.

Given the preponderance of associate degree programs which are employment-related to specific occupations or occupational sectors, this report has for many years sought to provide insight into specific programs which are *either exceptionally achieving* their ends *or are underperforming* in relationship to the state's current and future economic development needs.

The procedures for this review require each program's productivity to be evaluated in terms of enrollment, number of graduates, and percent of graduates placed in a related job or continuing their studies full-time. The following criteria apply:

1. Each program must produce at least six graduates during the evaluation year or an average of at least six graduates over the most recent three-year period.

2. At the most recent fall term, each program must enroll at least 16 students who generate 12 full-time equivalents.
3. At least 50 percent of the graduates available for job placement must be placed in a job related to their education or continue their education on a full-time basis.

Programs which fail to meet the above criteria must be canceled, suspended, or put on probation unless their continuation is justified to the Commission. Justification for programs may take into consideration such factors as manpower requirements, funding, and employment “stop outs” of students. In addition, three programs—General Technology, Vocational Technical Education, and General Engineering Technology—have historically had different and much more flexible standards of evaluation because of the unique needs they have filled and the low enrollments which they were expected to produce. Programs such as General Technology, Vocational Education, and General Engineering Technology have historically been considered “justified” for continuation regardless of whether they met the evaluation requirements.

When a program is placed on probation, the institution may continue to offer the program but must provide a plan for the program to meet all criteria within three years. Suspension means that the program’s inability to meet the minimum criteria is serious enough to discontinue temporarily the enrollment of new students in the program until the institution can study the need and demand for the program. A program may remain on suspension for three years.

Distribution of Associate Degree Programs by System and Sector

For this reporting period, associate degree programs exist in all sixteen technical colleges and the four two-year regional branches of the University of South Carolina. In addition, AA/AS associate degrees are offered at Fort Jackson by USC-Columbia and by USC-Beaufort at the Marine Corps Air Station. Both of these are offered at the request of the military base administration and commanders.

The associate degree programs in the state’s public institutions were evaluated using Fall 2012 enrollment data and academic year 2011-2012 graduation and employment data. Nine (9) associate degree programs in the two-year USC campuses and 304 associate degree programs in the technical college system were evaluated. New associate degree programs (those implemented within the past three years) are always excluded from this analysis.

General Analysis of the Programs of Study in the USC System

As stated above, all USC regional campuses designated as “two-year” as well as USC-Beaufort at the Marine Corps Air Station and USC-Columbia at Fort Jackson continue to offer Associate of Arts/Associate of Science degree programs. USC-Beaufort, formerly a two-year institution which was approved to become a four-year institution in June 2002, has been permitted by the Commission on Higher Education to continue to offer the Associate of Arts/Associate of Science degree program at the military bases in Beaufort. The number of graduates from the program at USC-Beaufort shows a downward trend over the past eight years (see **Table 1**). According to USC-Beaufort officials, the dramatic decline in the on-base AA program has been precipitated at least in part by the fact that once USC-Beaufort became a four-

year institution it charged tuition and fees for the two-year program at the four-year rate. Given the presence of other providers on the military base with significantly lower charges, enrollments have suffered. USC-Beaufort has recently adopted a new “military rate” for active military personnel; along with other resources that will be allocated to the program, USC-Beaufort is working proactively to revitalize this program.

In February 1998, USC-Columbia requested and received approval to revise its mission statement so that its ongoing offering of the Associate of Arts degree program at Fort Jackson would be officially included as part of its institutional mission. Enrollment and graduation data show (**see Table 1**) that this program is very small.

In the past, the Commission staff has held that, because it is small and peripheral to the mission of the state’s comprehensive *research* university, the AA/AS at Fort Jackson would be more appropriately offered by a two-year institution, either USC-Sumter or Midlands Technical College. The University administration has maintained historically that the program is important for carrying out the University’s community and humanitarian mission and has been strongly supported in this view by representatives of Fort Jackson, despite the small size of the program.

Over the past four years the numbers of graduates from the AA/AS programs in the University of South Carolina system have varied considerably as **Table 1** shows. The data reported from the USC-Columbia Institutional Research Office show that for 2011-2012 three of the six USC campuses offering the AA/AS program have experienced increases in graduates over the 2010-2011 academic year. Two USC campuses experienced a decrease in graduates in that year. In all, the total number of AA/AS graduates in the USC System decreased slightly from 361 to 356 from 2010-2011 to 2011-2012.

Completion of an AA/AS degree prior to transferring to a four-year institution has been shown to increase the rate at which transfer students complete the baccalaureate degree. That fact, linked with students’ eligibility for the Lottery Tuition Assistance Program while working toward their AA/AS degrees, suggests that the two-year USC regional campuses should consider promoting attainment of the AA/AS degree as a “best practice” to encourage progression toward completion of a baccalaureate degree.

Recently, two new developments in South Carolina have made the call to increase AA/AS graduates (and their subsequent successful transfers to baccalaureate programs) even more important. As a matter of state policy through legislation, the Education and Economic Development Act of 2005 has placed a premium on “seamless” transfer in higher education with the end of creating a better-prepared and better-credentialed work force in the state. More recently, the Higher Education Study Committee and the Commission on Higher Education have identified as the first goal in the *Leveraging Higher Education for Stronger South Carolina: Action Plan Implementation* making South Carolina one of the most educated states in the next 15 years by increasing degree attainment.¹ This goal cannot be achieved without successful efforts, targeted to various elements of the population, to increase the numbers of persons with earned associate and baccalaureate degrees in South Carolina. Coupled with clear empirical evidence of the value added by baccalaureate-degree completers to the state’s economic and civic development, this calls for state policy makers to make efforts to increase

¹*Leveraging Higher Education for a Stronger South Carolina: The Action Plan Implementation*, The Higher Education Study Committee, March 2009, 7.

AA/AS production at all the technical colleges and the USC two-year campuses. These institutions have a significant opportunity, challenge, and responsibility to increase the number of AA/AS degree completers and prepare them for entry into a four-year program.

Table 1
USC-System AA/AS Program Graduates

	2007 -08	2008 -09	2009 -10	2012- 11	2011- 12
4-Year					
USC-Columbia (Ft. Jackson)	11	5	8	6	7
USC-Beaufort	24	5	5	3	3
SUB-TOTAL	35	10	13	9	10
2-Year					
USC-Lancaster	99	119	112	86	87
USC-S'hatchie	52	85	109	134	127
USC-Sumter	81	50	64	88	75
USC-Union	57	45	44	44	57
SUB-TOTAL	289	299	329	352	346
TOTAL	324	309	342	361	356

Source: USC annual reports on associate degree data

Applied, Occupationally-Specific Two-Year Degrees in the USC System

The two-year campuses of the USC System present an important challenge to and opportunity for higher education institutions in South Carolina. Three of four of these two-year regional campuses are found in communities without a main campus of a technical college. These three campuses are USC-Lancaster, USC-Salkehatchie, and USC-Union. Of these three, only USC-Lancaster offers occupationally-specific degree programs, although neither their authorizing legislation nor Act 359 prohibits the others from offering such degrees. The occupational programs at USC-Lancaster are in nursing, criminal justice, and business. Graduates from the occupationally-specific two-year programs at USC-Lancaster are listed below in **Table 2** for the past two academic years. While the number of graduates has increased in nursing and business, the number of graduates in criminal justice has decreased. In the most recent year, all three of these occupational programs meet the CHE statewide productivity requirements. The USC-Lancaster occupational associate degree programs serve a small, but vital, set of counties in the state.

Table 2
USC-Lancaster Graduates of Two-Year Occupational Associate Degree
Programs of Study
(Academic Years 2010-2011 and 2011-2012)

	<u>Nursing</u>	<u>Criminal Justice</u>	<u>Business</u>
2010-2011	8	22	13
2011-2012	14	11	19

The Commission on Higher Education encourages collaborative efforts among the 2-year USC regional campuses and the technical colleges as an avenue to spur economic development. Both systems have responded with a variety of initiatives designed to meet the needs of rural areas. For example, USC offers the Bachelor of Science in Nursing-Generic (BSN-Generic) program through USC-Columbia at USC-Salkehatchie and at USC-Lancaster; the Bachelor of Arts in Liberal Studies degree; and the Bachelor of Arts in Organizational Leadership through USC-Columbia by traditional and distance education at the two-year regional campuses. York Technical College has reported significant enrollment growth in occupational courses/programs offered in Lancaster County through the Kershaw-Heath Springs Center. The Technical College of the Lowcountry is working closely with Colleton County to build a Quick Jobs Center to offer technology training; is collaborating with the Thunderbolt Career and Technology Center; and has partnered with Hampton County to renovate and expand technology training at the Mungin Center. In addition, a training center opened in Union in Fall 2009 in which USC-Union offers general education courses and Spartanburg Community College offers technical education courses. We commend this effort.

Another effort of note is the collaboration between the Technical College System and the University of South Carolina's new online initiative, Palmetto College. The two organizations are exploring articulation and transfer agreements in several program areas. The intent of the initiative is to build upon existing agreements and continue the development of seamless educational pathways for students.

In summary, graduation rates and student enrollment data for the current review period show that all the two-year programs in the USC system (AA/AS and occupational programs) meet the productivity requirements for two-year programs.

General Analysis of Associate Degree Programs in the Technical Colleges

A summary of the number of programs evaluated over the past 10 years in various categories at the technical colleges is found in **Table 3**.

Table 3:
Ten Year Summary Annual Associate Degree Program Evaluation
In the Technical Colleges

Year Evaluated	Good Standing	On Probation	Under Suspension	Cancelled	Total
2003	297	19	14	1	331
2004	265	22	11	5	303
2005	276	13	8	4	301
2006	277	15	5	4	301
2007	281	15	4	4	304
2008	274	28	2	2	306
2009	275	29	5	0	306
2010	270	30	5	0	309
2011	291	22	4	0	317
2012	285	16	4	0	304

In the data for the current annual report, 16 (5.2%) programs out of a total of 304 which were analyzed at the technical colleges are on probation. By comparison, last year's report showed a total of 22 (6.9%) degree programs on probation; and the previous year 30 (9.7%) programs were on probation. For this reporting year, the specific programs (by degree and institution) on probation can be found in **Table 4**.

Table 4
Associate Degree Programs on Probation
in Fall 2012
(N=16)

<u>College</u>	<u>Degree</u>	<u>Program</u>
Aiken Technical College	MKT	Marketing
Central Carolina Technical College	MFG	Electronics Technology
Denmark Technical College	IT	Computer Technology
Greenville Technical College	FIN	Accounting
Greenville Technical College	BUS	Administrative Office Technology
Greenville Technical College	STEM	Biotechnology
Greenville Technical College	STEM	Geomatics Technology
Midlands Technology College	MFG	Machine Tool Technology
Piedmont Technical College	STEM	Mechanical Engineering Technology
Piedmont Technical College	AGR	Diversified Agriculture
Piedmont Technical College	STEM	Mechanical Engineering Technology
Tri-County Technical College	MFG	Heating, Ventilation, Air Conditioning
Trident Technical College	MFG	Aircraft Maintenance Technology
Trident Technical College	STEM	Civil Engineering Technology
Trident Technical College	STEM	Mechanical Engineering Technology
Williamsburg Technical College	BUS	Administrative Office Technology

Engineering and Industrial Technology programs

In last year's report, Engineering Technology programs were at the top of the categorical list of programs on probation (N=8) with health programs second (N=6). This year Engineering Technology and manufacturing programs are at the top of the probation category with four programs each on probation with business programs third (N=2). Programs in Information Technology, Finance, Agriculture and Marketing complete the total of 16 probationary programs for this year's analysis.

The data showing low enrollments and graduates in Engineering Technology degree programs is long-standing. As a system, the Technical Colleges of South Carolina have been described as a model among the states for preparing the state workforce. However, the System needs to continue to work on developing a long term plan to remove Engineering Technology programs from the "probationary" group. These programs assist the state in attracting and retaining industries which want to locate in South Carolina. Such industries tend to be engines of major growth and innovation, attracting other corporations to enter into the state. BMW and Boeing are two examples of industries that have moved to South Carolina and provide extensive intangible benefits aside from jobs and income generated.

This report has cited the gulf between the often-stated need by the industrial/engineering community for Engineering Technology graduates and the small enrollments and graduates in these programs. Five years ago the Technical College System reported an initiative to address this issue more systematically by focusing on three areas:

- Elimination of excess coursework in some programs;
- Consolidation of multiple “engineering technology” programs at a single institution to concentrate resources and produce a more integrated curricular approach; and
- Vigorous recruitment of talented high school students—including the granting of college course credit through *Project Lead the Way*—into Engineering Technology programs.

Several institutions have developed initiatives aimed at increasing the numbers of student enrollment and graduation in the Engineering Technology programs. In September 2010, the SC Department of Education signed a formal agreement to work with technical colleges and public universities to promote engineering and mechatronics education after receiving a Rigorous Programs of Study grant from the US Department of Education to establish two pathways designed to positively impact the education of Science, Technology, Engineering, and Mathematics (STEM) professionals in the state. The partners include six technical colleges for Project Lead the Way and six technical colleges for mechatronics. Both PLTW and mechatronics are programs that begin in high school and allow students to take classes in which they receive dual credit. The University of South Carolina College of Engineering and Computing serves as the state’s Project Lead the Way (PLTW) University Affiliate for the grant.

Aiken Technical College has developed a dual-credit Pre-Engineering Academy in cooperation with Aiken County School District. As part of this program, Aiken Technical College provides the high school students with a dedicated advisor. The Pre-E Academy is based on the Project Lead the Way curriculum, humanities, and calculus as the foundation of courses. In Fall 2010, in addition to Teacher Cadets, the institution had 25 high school students enrolled in general education courses. Aiken Technical College and the University of South Carolina - Columbia have signed an articulation agreement pertaining to the Pre-Engineering program.

The Technical College System continues to make efforts to increase student enrollment and retention in engineering technology programs. Last year, a strategic retention plan was initiated across the state that creates flexible, seamless learning environments while also providing additional academic support for students in engineering technology programs:

- Curriculum revisions that require foundational math courses earlier in the program
- Enhanced support services such as open labs, supplemental instruction, and mentoring services
- Flexible scheduling to include smaller class sizes, as well as hybrid, day, and evening courses
- Work-based learning opportunities through internships and cooperative experiences
- Project-based learning experiences in core coursework
- Partnerships with secondary districts through PLTW, pre-engineering academies, and agreements

These efforts continue to meet with some success, since two engineering technology programs (**Table 7**) have moved from probation to good status. All the prevailing economic models for the state’s future assume that engineers supported by engineering technicians will together play an essential role in building South Carolina’s 21st century economy. To meet this goal, the decreasing numbers of students enrolled in and graduating from Engineering Technology programs in the state must be addressed.

Continuing Success of the AA/AS Programs in the Technical Colleges

The purpose of the AA/AS is to be the degree program in public two-year institutions which prepares students for transfer into baccalaureate programs. In South Carolina, AA/AS programs were begun in the 1970s in response to the needs of persons who for reasons of finance, geography, and/or historical under-representation in higher education (especially mature students, women, and minorities) found it much more possible to begin a baccalaureate degree program by taking the first two years of coursework at a technical college.

For this reporting year, all AA/AS programs in the Technical College System are in the “good” category (see **Table 5**) although the program at Orangeburg-Calhoun remains small.

Table 5
Graduates of AA/AS Degrees by Technical College
2007-08 through 2011-12

<u>Technical College</u>	<u>Year</u>				
	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
Aiken Tech	33	45	53	61	74
Central Carolina	35	42	31	28	37
Denmark	26	34	22	10	27
Florence-Darlington	29	36	59	68	76
Greenville	200	207	233	233	235
Horry-Georgetown	67	104	108	182	265
Midlands	267	308	285	302	426
Northeastern	32	28	41	30	28
Orangeburg-Calhoun	8	8	20	9	14
Piedmont	59	58	58	55	52
Spartanburg Community College	46	63	63	106	130
Lowcountry	26	28	54	29	37
Tri-County	69	78	86	120	90
Trident	302	342	313	368	364
Williamsburg	20	17	20	24	44
York	55	60	45	59	74
TOTAL	1274	1458	1491	1684	1973

As **Table 5** demonstrates, the AA/AS programs in the Technical College System have been a great success in opening up the possibilities for transferring into a four-year degree program for many South Carolinians. The data for 2011-2012 show that the programs continue

to produce a significant number of graduates. Twelve institutions graduated more students than in the preceding year and four graduated fewer students. The AA/AS program is of unique benefit to the state and the student because the program provides the first two years of a baccalaureate education at much lower cost than a generic four-year institution. As of Fall 2009, all degree designations in the Technical College System have been changed to the three nationally recognized ones: A.S. Associate in Science; A.A. Associate in Arts; A.A.S Associate in Applied Science.

The 2009 Higher Education Action Plan addresses the importance of institutions of higher learning creating pathways to successfully transfer students from two-year degree programs to four-year degree programs. In making South Carolina one of the most educated states in the country by the year 2030, the Action Plan recommends that the State “create incentives and requirements for seamless transitions between and among two-year and four-year institutions, including the implementation of a statewide initiative to monitor transfer.”² The CHE has developed an on-line course transfer and articulation tool, SC TRAC, which will help transfer students identify course equivalencies and degree credit awards for transfer courses. Work is continuing with the institutions to manage course equivalencies, transfer information into the system, and to install interfaces with the system so that information related to course articulation and transfer is easily added and displayed.

Importance of the Associate Degree Nursing Programs

For a number of years this annual report has been grounded in two basic assumptions about the program of study leading to the associate degree in nursing:

1. In South Carolina the associate degree in nursing is accepted by employers as a legitimate degree for a Registered Nurse (RN).
2. Meeting employers’ demands for a well-educated nursing workforce to provide safe care in hospitals and other healthcare settings requires the sustained commitment of each institution to enroll and graduate increasingly larger numbers of students. (As in many other states, South Carolina regularly graduates about two-thirds of all its new nurse graduates from associate degree programs.)

During the recession, demand for new nurses has declined, in part because of delayed retirements, but at the moment we have no way to quantify the decrease. The actual level of employer demand for nurses is unknown because no database has been made available to show what the actual level of employer demand might be. It is, therefore, not possible to know exactly for how many years a sustained commitment to increase the numbers of nursing graduates will be required. However, the recently established Office for Healthcare Workforce Research in Nursing in USC-Columbia’s S.C. Center for Nursing Leadership has set one of its priorities as collecting and disseminating supply and demand data. Currently, the South Carolina Technical College System reports a 93% nursing placement rate for the ADN graduates.

The supply of graduates from nursing programs in the Technical College System has grown convincingly since the issuance of the Colleagues in Caring report in 2001. Among the 14

²*Leveraging Higher Education for a Stronger South Carolina: The Action Plan Implementation*, The Higher Education Study Committee, March 2009, 18.

established ADN programs in the Technical College System, seven graduated significantly more students in this year's reporting class and seven graduated fewer than last year. A total of 1264 ADN nurses graduated from the Technical College system in 2010-2011. The significant growth in ten years (2002-03 to 2011-12) from 748 graduates per year in 2002-2003 to 1264 in 2011-2012 demonstrates the capacity of the technical college system to respond to market demand.

Table 6 shows the significant increase in the total number of graduates over the last ten years:

Table 6
Total Number of Graduates from Technical Colleges'
Associate Degree in Nursing Programs for Years
2002-2003 through 2011-2012

2002-2003	748
2003-2004	918
2004-2005	968
2005-2006	940
2006-2007	982
2007-2008	1156
2008-2009	1274
2009-2010	1283
2010-2011	1272
2011-2012	1264

Degree Programs No Longer on Probation

For the current reporting year, a total of seventeen programs which had been on probation in the technical colleges for last year's reporting period have been recommended by the State Technical College System for placement in good standing. In this group there are three programs in Engineering Technology, two each in Business, Health Sciences, Manufacturing, and Agriculture, respectively, and one each in Finance, Marketing, Arts, Hospitality Instructional Technology and Law. The degrees and institutional locales of all the programs moving from Probation to Good are found below in **Table 7**. Engineering Technology programs accounted for 18% (N=3) of the programs moving from Probation to Good status.

Table 7
Degree Programs Returning to
"Good" Status from "Probation" 2011-2012
(N=10)

<u>College</u>	<u>Degree</u>	<u>Program</u>
Denmark Technical College	BUS	Administrative Office Technology
Florence-Darlington Tech College	HEA	Dental Hygiene
Greenville Technical College	BUS	Supply Chain Management
Greenville Technical College	MFG	Automotive Technology
Northeastern Technical College	BUS	Administrative Office Technology
Orangeburg-Calhoun Tech College	BUS	Administrative Office Technology
Tech College of the Lowcountry	STEM	Civil Engineering Technology
Tri-County Technical College	IT	Computer Technology
Tri-County Technical College	STEM	Electronics Engineering Technology
York Technical College	BUS	General Business

Tabular Analysis of Associate Degree Programs

Table 8 provides a succinct quantitative analysis of the programs of the technical colleges for this period which are on suspension. It is noteworthy that there are only four programs in this category, a fact which suggests that planning by the Technical College System for technical programs, based upon community and business demand for graduates in certain fields has minimized the need to suspend and cancel programs.

Table 8
Associate Degree Programs on Suspension in 2012
(or Continued for 1st or 2nd Year Suspension)
(N=4)

<u>College</u>	<u>Degree</u>	<u>Program</u>
First Year:		
Aiken Technical College	BUS	Administrative Office Technology
Spartanburg Technical College	STEM	Civil Engineering Technology
Florence-Darlington Technical College	STEM	Electro-mechanical Engr Technology
Denmark Technical College	MFG	Electronics Technology

Summary

All of the associate degree programs in the University of South Carolina system and 285 of the 304 technical college programs evaluated for this report meet the “good” status requirements for this reporting year. The associate degree programs in the USC system and the Technical College System are overwhelmingly meeting the modest statewide productivity standards which have been measured since 1983 in these annual reports.

A significant decline in enrollment and graduates in the AA program at USC-Beaufort will need to be monitored for improvement over the next few years. Similarly, analysis of programs in the Technical College System also suggests that despite improvement in five programs, efforts need to be continued to bolster enrollments and graduations in Engineering Technology, a field important to the State’s economic development.

Recommendation

The Committee on Academic Affairs and Licensing commends favorably to the Commission this report’s designation of programs for the current reporting year as shown in **Tables 1, 3, 6, 7, and 8**. Because of the importance of certain associate degree programs to economic development in South Carolina, the staff further recommends that the Committee and Commission encourage the State Technical College system to continue to explore ways to increase enrollments and retention to graduation in programs in Engineering Technology.

Given the present economic situation, it is imperative that the technical colleges and the regional campuses work collaboratively to increase the numbers of AA/AS degree completers and prepare them for entry into a four-year program. A skilled workforce is key to economic prosperity for any state. It will take all of our systems working together to continue to create a pervasive education culture in the state of South Carolina.